| 10/738,324   GRANACHER ET AL.  |   | Index of Claims                         |        |          |           |              |              |           |           |              |                  |           |            |                           | Application/Control No. |          |         |            |                 |           |           |           |          | Applicant(s)/Patent under Reexamination |         |                 |                |                    |                 |                |           |           |  |   |
|--|---|---|--------|----------|-----------|--------------|--------------|-----------|-----------|--------------|------------------|-----------|------------|---------------------------|-------------------------|----------|---------|------------|-----------------|-----------|-----------|-----------|----------|---|---------|-----------------|----------------|--------------------|-----------------|----------------|-----------|-----------|--|---|
| Examiner   Noan Karnen   3747   374 |   | 1 180 181 1 181 1 180 1 1 1 1 1 1 1 1 1 |        |          |           |              |              |           |           |              |                  |           |            |                           | 10/738 324              |          |         |            |                 |           |           |           |          |   |         |                 |                |                    |                 |                |           |           |  |   |
|  |   |   |        |          |           |              |              |           |           |              |                  |           |            |                           |                         |          |         |            |                 |           |           |           |          |   |         |                 |                |                    |                 |                |           |           |  |   |
|  |   |   |        |          |           |              |              |           |           |              |                  |           |            |                           |                         |          |         | Noah Kamen |                 |           |           |           |          |   |         |                 | 374            | 47                 |                 |                |           |           |  |   |
| Claim  |   |   |        |          |           |              |              |           |           |              |                  |           |            |                           |                         |          |         |            |                 |           |           |           |          |   |         |                 |                |                    |                 |                |           |           |  | _ |
| Claim  |   |   |        | <b>V</b> | Rejected  |              |              |           |           | ŀ            | -  <sup>(T</sup> |           |            | hrough numer<br>Cancelled |                         |          |         | al) N      |                 |           | Non-Elect |           |          | ted                                     |         | A               | Appeal         |                    |                 |                |           |           |  |   |
| The color of the |   |   |        | =        | ΑI        | low          | 1            |           |           | ÷            |                  |           | Restricted |                           |                         |          | 1       |            | ı               | Int       | terf      | eren      | ice O    |   | 0       | Objected        |                |                    |                 |                |           |           |  |   |
| The color of the |   | Cla                                     | im     |          |           | ate          |              |           |           |              |                  | Claim     |            |                           |                         | ſ        |         |            |                 |           | Claim     |           |          | Date                                    |         |                 | $\neg$         |                    |                 |                |           |           |  |   |
| 1   V  |   |   |        |          | Т         | Т            | Ť            | Ť         | Т         | Т            | Т                |           |            |                           |                         |          | Т       | ПТ         |                 | T         |           |           |          |   |         |                 |                | Т                  | П               |                |           |           |  |   |
| 2 0         52         102         103           3 0         53         103         103         104           5 0         54         104         104         104         104         105         105         105         105         105         105         105         105         105         106         107   |   | Final                                   | Origin | 8/31/0   |           |              |              |           |           |              |                  |           |            | Final                     | Origina                 |          |         |            |                 |           |           |           |          | Final                                   | Origina |                 |                |                    |                 |                |           |           |  |   |
| 3   0   103   103   104   104   104   104   104   104   104   105   105   105   105   105   106   107   107   107   108   109   100   10 | • |   |        |          | $\exists$ | +            | $\pm$        | $\pm$     | 1         | $\pm$        | 1                | $\exists$ | ŧ          |                           |                         |          | 士       |            | $\exists$       | $\exists$ | $\pm$     | +         | ]        |   |         |                 |                | 士                  |                 | $\pm$          |           |           |  |   |
| 4         0         104         104         105         6         7         105         106         7         106         7         108         109         109         109         109         109         109         109         109         109         109         110         111 <t< td=""><td></td><td></td><td></td><td></td><td><math>\dashv</math></td><td></td><td>4</td><td><math>\perp</math></td><td><math>\top</math></td><td><math>\Box</math></td><td><math>\Box</math></td><td><math>\Box</math></td><td>I</td><td></td><td></td><td><math>\Box</math></td><td><math>\perp</math></td><td>lacksquare</td><td></td><td><math>\Box</math></td><td>4</td><td>Ţ</td><td>]  </td><td></td><td></td><td>П</td><td>Π.</td><td>T</td><td>П</td><td>Ţ</td><td><math>\Box</math></td><td></td><td></td><td></td></t<>   |   |   |        |          | $\dashv$  |              | 4            | $\perp$   | $\top$    | $\Box$       | $\Box$           | $\Box$    | I          |                           |                         | $\Box$   | $\perp$ | lacksquare |                 | $\Box$    | 4         | Ţ         | ]        |   |         | П               | Π.             | T                  | П               | Ţ              | $\Box$    |           |  |   |
| 5 O         55         105         106         107         107         107         107         107         107         108         108         109         109         100         100         100         100         100         100         100         100         110         101         111   |   |   |        | 읝        | +         | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  | ŀ          |                           |                         | +        | +       | ┿          | Н               | $\dashv$  | +         | +         | 4        |   |         | Н               | +              | +                  | $\vdash$        | +              | +         | $\dashv$  |  |   |
| 7         8         107         107         8         108         108         109         109         109         109         109         110         111  |   |   |        | ŏ        | $\dashv$  | 十            | +            | $\dagger$ | $\dagger$ | $^{\dagger}$ | 7                | 一         | ŀ          |                           |                         | $\dashv$ | 十       | +          | H               | $\forall$ | $\top$    | +         | ┪        |   |         | H               | +              | 十                  | $\vdash$        | +              | $\forall$ | $\dashv$  |  |   |
| 8       9       108       109       109       109       109       110       110       110       111 </td <td></td> <td></td> <td></td> <td>4</td> <td><math>\Box</math></td> <td>ightharpoons</td> <td>I</td> <td></td> <td>1</td> <td>1</td> <td><math>\Box</math></td> <td><math>\Box</math></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><math>\Box</math></td> <td>1</td> <td></td> <td>]  </td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>П</td> <td>I</td> <td></td> <td></td> <td></td> <td></td>   |   |   |        | 4        | $\Box$    | ightharpoons | I            |           | 1         | 1            | $\Box$           | $\Box$    |            |                           |                         |          |         |            |                 | $\Box$    | 1         |           | ]        |   |         |                 |                |                    | П               | I              |           |           |  |   |
| 9  |   |   |        | $\vdash$ | -         | 4            | +            | +         | +         | +            | 4                | 4         |            |                           |                         | _        | +       | -          | Н               | 4         | _         |           | 4        |   |         | Ш               |                | ╀-                 | $\vdash \vdash$ | +              | -         | $\sqcup$  |  |   |
| 10   |   |   |        | Н        | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  | -          |                           |                         | +        | ╫       | +          | Н               | ┰         | +         | +         | ┨╢       |   |         | Н               |                | +-                 | ╁┼              | +              | +         | $\dashv$  |  |   |
| 12   |   |   |        | Н        | $\dashv$  | 十            | $^{\dagger}$ | +         | $\dagger$ | $\top$       | 1                | $\dashv$  |            |                           |                         | 十        | 十       | ╈          | $\Box$          | 寸         | +         | $\dagger$ | 1. ∣     |   |         | H               | _              | +                  | $\vdash$        | 十              | +         | $\dashv$  |  |   |
| 13   |   |   |        |          |           |              | $\perp$      | I         | 1         |              |                  |           |            |                           |                         |          | $\Box$  |            |                 | $\Box$    | $\Box$    |           | ]        |   |         |                 |                | I                  |                 |                |           |           |  |   |
| 14   |   |   |        | Н        |           | +            | 4            | +         | +         | +            | 4                | $\dashv$  |            |                           |                         | _        | +       | +          | Н               | $\dashv$  | 4         | +-        | 4        |   |         | Н               | -              | +-                 | $\vdash$        | +              | $\perp$   | Ц         |  |   |
| 15   |   | $\vdash$                                |        | Н        | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  | 1          |                           |                         | +        | +       | +          | $\vdash$        | $\dashv$  | +         | +         | ┥╽       |   |         | $\vdash$        | +              | +                  | ₩               | +              | +         | $\dashv$  |  |   |
| 16       66       116       117       118       117       118       1117       118       118       118       119       119       120       119       120       120       120       120       121       121       122       122       122       122       122       123       123       123       124       124       124       124       125       126       126       127       127       128       128       128       128       128       128       128       129       130       130       33       33       33       33       34       131       34       134       134       134       134       135       33       34       136       136       37       136       88       135       36       88       136       39       140       40       90       140       41       141       141       141       141       144       44       94       99       149       99       149       149       99       149       149       99       149       149       149       149       149       149       149       149       149       149       149       149       149       149       149 </td <td></td> <td></td> <td></td> <td>Н</td> <td><math>\dashv</math></td> <td>+</td> <td>+</td> <td>+</td> <td><math>\dagger</math></td> <td><math>^{\dagger}</math></td> <td>┪</td> <td>┪</td> <td>ŀ</td> <td></td> <td></td> <td><math>\dashv</math></td> <td>+</td> <td>+</td> <td>H</td> <td>十</td> <td>+</td> <td>+</td> <td>┪╢</td> <td></td> <td></td> <td>H</td> <td><math>\top</math></td> <td>T</td> <td><math>\vdash</math></td> <td>+</td> <td>+</td> <td><math>\exists</math></td> <td></td> <td></td>  |   |   |        | Н        | $\dashv$  | +            | +            | +         | $\dagger$ | $^{\dagger}$ | ┪                | ┪         | ŀ          |                           |                         | $\dashv$ | +       | +          | H               | 十         | +         | +         | ┪╢       |   |         | H               | $\top$         | T                  | $\vdash$        | +              | +         | $\exists$ |  |   |
| 18       19       68       118       119       119       119       120       119       120       121       121       121       121       121       121       121       121       121       121       122       122       122       122       123       123       124       124       124       124       124       124       124       125       126       126       126       127       127       127       127       127       128       128       129       129       130       130       131       131       131       131       131       131       131       132       133       133       133       133       133       133       133       133       133       134       134       134       134       134       134       134       134       134       134       134       134       135       135       135       135       135       135       135       135       135       135       135       136       137       138       139       140       141       141       141       141       141       141       141       142       143       143       144       144       145       146<  |   |   |        |          | $\Box$    |              |              |           | I         |              |                  |           |            |                           |                         |          | 1       |            |                 | $\Box$    |           |           | ]        |   | 116     |                 |                |                    |                 |                |           |           |  |   |
| 19   |   |   |        | Н        | $\dashv$  | +            | +            | +         | +         | 4            | -                | 4         |            |                           |                         | +        | +       | +          | Н               | -+        | +         | -         | - [(.)   |   |         | Н               | -              | 4-                 | H               | +              | +         | 4         |  |   |
| 20   |   |   |        | Н        | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  |            |                           |                         | +        | +       | +          | Н               | $\dashv$  | +         | +         | -∤⊹ી     |   |         | ╁               | +              | +                  | Н               | +              | +         | H         |  |   |
| 122  |   |   | 20     |          |           | $\top$       | T            | $\top$    | $\dagger$ | T            | 1                | $\exists$ |            |                           | 70                      | $\dashv$ | $\top$  | +-         | $\Box$          | 十         | $\top$    | 十         |          |   |         | Н               | +              | T                  | H               | 十              | H         |           |  |   |
| 23         73         123         124         124         125         125         125         125         126         126         126         127         127         128         128         128         129         128         129         129         129         129         130         130         131         131         131         131         131         131         131         131         131         131         133         133         133         133         133         133         134         134         134         134         134         135         136         136         136         136         136         137         135         136         137         137         138         138         138         138         139         140         140         141         141         141         141         142         142         143         143         144         144         144         144         144         144         144         144         145         146         147         148         148         148         149         149         149         148         149         149         149         149         149         149         149  |   |   |        | П        |           | $\bot$       | $\perp$      | $\perp$   | $\perp$   | $\Box$       | $\Box$           |           |            |                           |                         |          |         |            |                 | $\Box$    |           | $\Box$    | ]. [     |   |         | П               |                |                    | П               | $\blacksquare$ | П         |           |  |   |
| 24         124         124         125         125         125         125         125         125         126         127         127         127         127         127         127         127         127         128   |   |   |        | Н        | +         | +            | +            | +         | +         | +            | $\dashv$         | 4         |            |                           |                         | -        | +       | +          | $\vdash \vdash$ | _         | +         | +         | -∤`∣     |   |         | $\vdash$        | +              | +                  | $\vdash$        | +              | +         | 4         |  |   |
| 25         125           26         76           27         126           28         78           29         128           30         80           31         81           32         82           33         131           34         84           35         85           36         86           37         87           88         133           39         89           40         90           41         91           42         92           43         93           44         94           45         96           46         96           47         98           49         99   |   |   |        | $\vdash$ | $\dashv$  | +            | +            | +         | +         | $\dagger$    | ┪                | ㅓ         | -          |                           |                         | $\dashv$ | +       | +          | $\vdash$        | $\dashv$  | +         | +         | -{∷      |   |         | ╁               |                | +                  | $\vdash$        | +              | +         | $\dashv$  |  |   |
| 27         38         127         78         128         128         128         128         129         129         129         130         130         130         130         130         131         131         131         131         131         131         131         131         133         133         133         133         133         133         133         133         133         133         133         133         134         134         134         134         134         134         134         134         134         135         135         135         135         135         136         136         136         137         137         137         137         137         137         137         137         138         138         138         138         138         139         140         140         141         141         141         141         141         141         141         141         141         141         141         141         141         142         142         142         143         144         144         144         144         144         144         144         145         145         145         145   |   |   |        |          | $\top$    | 十            | $\dagger$    | $\top$    | †         | 寸            | 1                | 乛         |            |                           |                         |          | 1       | 1          | H               | 寸         | 十         | $\top$    | 1        |   |         | П               | $\top$         | T                  | $\Box$          | +              | $\Box$    | $\Box$    |  |   |
| 28       78       128         29       79       129         30       80       130         31       81       131         32       82       132         33       83       133         34       84       134         35       85       135         36       86       136         37       87       137         38       88       138         39       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |   |   | 26     | Ц        | _         | $\perp$      | $\downarrow$ | $\perp$   | $\bot$    | $\perp$      | $\dashv$         |           |            |                           |                         |          | $\perp$ | $\perp$    |                 | _         |           | $\perp$   | ]        |   |         | П               |                |                    | П               |                |           |           |  |   |
| 29       79       129         30       80       130         31       81       131         32       82       132         33       83       133         34       84       134         35       85       135         36       86       136         37       87       137         38       88       138         39       89       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |   |   |        | Н        | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  |            |                           |                         |          | +       | +-         | $\vdash \vdash$ | $\dashv$  | +         | +         | -        |   |         | $\vdash$        | +              | 4-                 | $\vdash$        | +              | +i        |           |  |   |
| 30   |   |   |        | Н        | $\dashv$  | +            | +            | $\dashv$  | +         | +            | $\dashv$         | $\dashv$  | 1          |                           |                         | +        | +       | +          | ╟┤              | $\dashv$  | $\dashv$  | +         | ┪╢       |   |         | $\vdash$        | _              | +                  | $\vdash$        | ╁              | ╁         | $\dashv$  |  |   |
| 32       33       34       34       34       34       34 <td< td=""><td></td><td></td><td></td><td></td><td><math>\Box</math></td><td>士</td><td>I</td><td></td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><math>\top</math></td><td></td><td>П</td><td><math>\Box</math></td><td><math>\top</math></td><td></td><td>]  </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>П</td><td><math>\Box</math></td><td></td><td></td></td<>   |   |   |        |          | $\Box$    | 士            | I            |           | I         |              |                  |           |            |                           |                         |          | $\top$  |            | П               | $\Box$    | $\top$    |           | ]        |   |         |                 |                |                    |                 |                | П         | $\Box$    |  |   |
| 33       34       35       36       35       36       37       38       37       38       39       38       39       39       39       39       38       39 <td< td=""><td></td><td></td><td></td><td>П</td><td></td><td><math>\perp</math></td><td><math>\perp</math></td><td><math>\perp</math></td><td><math>\perp</math></td><td><math>\dashv</math></td><td><math>\Box</math></td><td><math>\Box</math></td><td></td><td></td><td></td><td><math>\Box</math></td><td></td><td></td><td>П</td><td></td><td></td><td><math>\perp</math></td><td>]  </td><td></td><td></td><td>П</td><td><math>\perp</math></td><td><math>oldsymbol{\perp}</math></td><td>П</td><td>1</td><td>П</td><td></td><td></td><td></td></td<>  |   |   |        | П        |           | $\perp$      | $\perp$      | $\perp$   | $\perp$   | $\dashv$     | $\Box$           | $\Box$    |            |                           |                         | $\Box$   |         |            | П               |           |           | $\perp$   | ]        |   |         | П               | $\perp$        | $oldsymbol{\perp}$ | П               | 1              | П         |           |  |   |
| 34       134       134         35       85       135         36       86       136         37       87       137         38       88       138         39       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       96       146         47       97       147         48       99       149   |   |   |        | $\vdash$ | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  |            |                           |                         | -        | +       | +-         | $\vdash \vdash$ | $\dashv$  | +         | +         | -        |   |         | $\vdash$        | +              | ╁                  | H               | +              | +         | Н         |  |   |
| 35     85       36     135       37     87       38     88       39     89       40     90       41     91       42     92       43     93       44     94       45     95       46     96       47     97       48     98       49     99       148     148       49     149  |   |   |        | H        | $\dashv$  | +            | +            | +         | +         | $\dashv$     | $\dashv$         | $\dashv$  |            |                           |                         | $\dashv$ | 十       | +          | $\vdash$        | $\dashv$  | +         | ╅         | ╣        |   |         | $\vdash$        | +              | +-                 | $\vdash$        | +              | ╅         | $\dashv$  |  |   |
| 37       87       137       138         38       88       138       139         40       90       140       140         41       91       141       141         42       92       142       143         43       93       143       144         45       95       145       146         46       96       146       147         48       98       148       148         49       99       149       149  |   |   |        |          |           |              | 1            | T         | 1         | I            |                  |           | l          |                           |                         |          | 士       |            |                 |           |           | 1         | <b>j</b> |   | 135     |                 |                | $\top$             |                 | $\top$         | $\top$    |           |  |   |
| 38       88       138         39       90       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |   |   |        | Ш        | _         | 4            | 1            | $\perp$   | 1         | $\perp$      | $\Box$           | $\Box$    |            |                           |                         |          | $\bot$  | $\perp$    | $\Box$          | $\Box$    | $\perp$   | I         | ]        |   |         | П               | $\perp$        | $oldsymbol{\perp}$ | П               | Ţ              | $\Box$    |           |  |   |
| 39       89       139         40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |   |   |        | H        | +         | +            | +            | +         | +         | +            | $\dashv$         | -         | .          |                           |                         | +        | +       | +-         | $\vdash \vdash$ | $\dashv$  | -         | +         | 4        |   |         | $\vdash$        | -+-            | +                  | $\vdash$        | +-             | +-        |           |  |   |
| 40       90       140         41       91       141         42       92       142         43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |   |   |        | H        | -         | +            | +            | +         | +         | $^{+}$       | +                | $\dashv$  | -          |                           |                         | +        | +       | +          | $\vdash$        | $\dashv$  | +         | +         | ┪        |   |         | $\vdash$        | $\dashv$       | +                  | $\vdash$        | +              | +         | $\dashv$  |  |   |
| 42       92       142       143         43       93       143       143         44       94       144       144         45       95       145       145         46       96       146       147         48       98       148       148         49       99       149       149  |   |   | 40     |          |           | 土            | 士            | 土         | 士         | 士            | 亅                | J         | t          |                           | 90                      |          | 士       | 上          |                 | ⇉         | $\perp$   | 土         | j        |   | 140     |                 |                |                    |                 | 士              |           |           |  |   |
| 43       93       143         44       94       144         45       95       145         46       96       146         47       97       147         48       98       148         49       99       149  |   |   |        | П        | $\Box$    | Ţ            | Ţ            | 1         | Ţ         | $\bot$       | I                | $\Box$    |            |                           |                         | $\bot$   | Ţ       | $\bot$     | П               | $\Box$    | T         | $\perp$   | ] !      |   |         | П               | $\blacksquare$ | $oldsymbol{\Box}$  | П               | $\bot$         | Д         |           |  |   |
| 44     94       45     95       46     96       47     97       48     98       49     99  |   | <u> </u>                                |        | Н        | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  | . }        |                           |                         | +        | +       | +          | ┞╌┤             | $\dashv$  | +         | +         | ┨╏       |   |         | $\vdash \vdash$ | +              | +                  | $\vdash \vdash$ | +              | +         | $\dashv$  |  |   |
| 45     95       46     96       47     97       48     98       49     99  |   | -                                       |        | $\vdash$ | $\dashv$  | +            | +            | +         | +         | +            | $\dashv$         | ᅱ         | 1          |                           |                         | $\dashv$ | +       | +          | ┤┤              | $\dashv$  | +         | +         | ┨        |   |         | $\vdash$        | +              | +                  | $\vdash \vdash$ | +              | +         | $\dashv$  |  |   |
| 47     97       48     98       49     99  |   |   | 45     |          |           | 丁            | 丁            |           | 丁         | <u> </u>     | 1                | ╛         |            |                           | 95                      |          |         |            |                 | 丁         |           |           | ]        |   | 145     |                 |                | 上                  |                 | 上              |           |           |  |   |
| 48     98       49     148       149     149   |   |   |        | П        | $\bot$    | $\bot$       | 4            | $\bot$    | 1         | $\bot$       | 4                | _]        |            |                           |                         | $\bot$   | 7       | $\bot$     | $\sqcup$        | $\dashv$  | $\bot$    | $\perp$   | ↲▕       |   |         | П               | $\perp$        | F                  | oxdot           | $\bot$         | $\Box$    | $\Box$    |  |   |
| 49 99 149 149  |   |   |        | $\vdash$ | +         | +            | +            | +         | +         | +            | $\dashv$         | $\dashv$  | -          |                           |                         | +        | +       | +          | ├─┤             | $\dashv$  | +         | +         | ┨╏       |   |         | $\vdash \vdash$ | +              | +                  | ╁┼              | +              | ╀┤        | $\dashv$  |  |   |
|  |   |   |        | $\vdash$ | $\dashv$  | +            | 十            | +         | +         | +            | 7                | ᅱ         | ŀ          |                           |                         | $\dashv$ | +       | +          | $\vdash \vdash$ | $\dashv$  | +         | 十         | ┧╎       |   |         | $\vdash \vdash$ | $\dashv$       | +                  | -               | +              | +         | $\dashv$  |  |   |
|  |   |   |        |          |           | $\perp$      | 1            | I         | 1         |              |                  |           | Į          |                           |                         |          |         |            |                 |           |           |           | ]        |   |         | $\Box$          |                | $\perp$            | 口               | 工              | $\Box$    |           |  |   |